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| 10/672,149 | 09/26/2003 | Selena Chan | | 6083 |

7590 07/17/2007
Intel Corporation
2200 Mission College Blvd.
Santa Clara, CA 95052

EXAMINER

WILDER, CYNTHIA B

| ART UNIT | PAPER NUMBER |
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1637

| MAIL DATE | DELIVERY MODE |
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07/17/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/672,149

Applicant(s)

CHAN ET AL.

Examiner

Cynthia B. Wilder, Ph.D.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 1-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-34 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

FINAL ACTION

1. Applicant's amendment filed April 16, 2007 is acknowledged and has been entered. Claim 26 is amended. Claims 26-34 are pending. All of the arguments have been thoroughly reviewed and considered but are not found persuasive for the reasons discussed below. Any rejection not reiterated in this action has been withdrawn as being obviated by the amendment of the claims.

This action is made FINAL.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Previous Rejection

3. The prior art rejection under 35 USC 102(e) directed to claims 26, 27, and 29-34 as being anticipated by Su et al is withdrawn in view of Applicant's amendment of the claim 26. The prior art rejection under 35 USC 103(a) directed to claims 26-34 as being unpatentable over Shipwash in view of Shipway is maintained and discussed below.

Claim Rejections - 35 USC § 103

4. Issue I. Claims 26-34 are rejected under 35 USC 103(a) as being unpatentable over Shipwash in view of Shipway et al.

Applicant's Traversal

(a) Applicant traverses the rejection on the following ground: Applicant summarizes the Examiner's rejection and states that regarding the packed nanoparticles, Figure 14 of Shipwash shows that particles are not packed and stationary in a second channel. Applicant states that in fact paragraph 0425

which is included in the Example 15, that that the components flow past a detector, those components being the beads/nanoparticles and bound sample. Applicant states that if the particles flow past the detector they cannot at the same time be packed and stationary within a channel. Applicant states that the other paragraphs recited in the Action do not teach packed nanoparticles as alleged, i.e., describes nanoparticles and that reactions are carried out on the surface of such nanoparticles; provides a generalized discussion of microfluidics and microsystem fabrication; and discusses amino acid detection. Applicant states that in short, Shipway fails to teach or suggest the limitation, wherein the plurality of cross-linked nanoparticles aggregates affixed within the second channel are packed and stationary within the second channel. Applicant further states that Shipway is also silent with respect to nanoparticle aggregates affixed within a channel, wherein the plurality of cross-linked nanoparticles aggregates affixed within the second channel are packed and stationary within the second channel as the amended claims presently recite. Applicant states that in light of the claim 26, the obviousness rejection should be withdrawn as Shipwash and Shipway do not teach or suggest this invention as a whole.

Examiner's Response

5. All of the arguments have been thoroughly reviewed and considered but are not found persuasive for the reasons that follow. In response to Applicant's arguments against the Shipwash reference, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In*

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re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this case, contrary to Applicant's arguments, Shipwash do teach wherein the apparatus comprises particles that are packed and stationary within a channel. Shipwash teaches at paragraph 0270 that "the nanoparticles can be held in position using magnetic nanoparticles and magnetic force or by a filter, grid or other support". Applicants own specification support the teachings of Shipwash in stating that "[A] constriction or filter at the end of the microchannel may be use to hold the nanoparticles" (see the last sentence of paragraph 0089 at page 26). Additionally, the secondary reference of Shipway further supports the use of nanoparticles packed and stationary in a microchannel. As previously stated Shipway provides a review of nanoparticle arrays on surfaces. Shipway teaches that nanoparticle aggregates can be immobilized to a surface so their aggregation state can be carefully controlled. Shipway further provides motivation for packing and immobilizing nanoparticles to a surface. Shipway teaches that providing nanoparticles aggregates that are immobilized on a surface enhance the excitation frequency for surfaced enhanced Raman Scattering (page 36, 37, section 4.1.2 and Figure 18). Applicant's arguments are not sufficient to overcome the prior art rejection. According the rejections under 35 USC 103(a) are maintained.

Conclusion

6. No claims are allowed. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

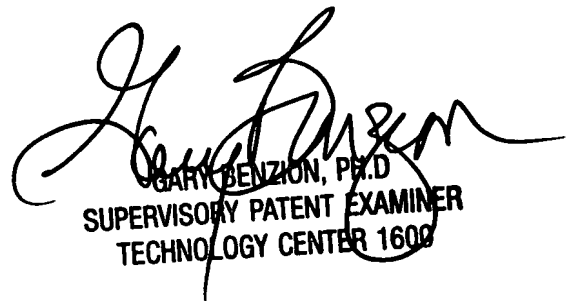
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia B. Wilder, Ph.D. whose telephone number is (571) 272-0791. The examiner can normally be reached on a flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on (571) 272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

cbw



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